Cont.

severely curtail or damage a developing economy if prematurely imposed upon its industries whose well-being upon which the developing nation relies for continued economic well-being. The developing nation will either (1) have to rely upon and become dependent upon those devices and implements developed by established countries whose economies give them the financial wherewithal to indulge wide spread pollution control (2) prematurely impose upon that growing countries industrial base pollution control implementation, as required by many international treaties, that could cripple the country's economy, (3) seek and implement less costly and easily implemented pollution control technologies rather than those devices which are engineered for incorporation within the internal combustion engine and its subsystems.

Page 7, lines 13-17:

02

The invention is a water-in-oil emulsion fuel substitute for hydrocarbonaceous middle distillate fuels. The invention is comprised of a hydrocarbonaceous middle distillate fuel, water, and an additive comprising water, a mixture of fatty acids, polyanhydride, and ammonium hydroxide. Additionally, other fuel quality enhancing agents can also be added to the emulsion fuel as required.

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The invention combines water with the hydrocarbonaceous middle distillate fuel to form a water-in-oil emulsion fuel that can be substituted for the middle distillate fuel combustion applications. Prior to combining the water with the middle distillate fuel, the water is filtered through reverse osmosis, or other suitable filtration means, to remove particulate and sediment contaminants that are naturally found in various degrees in water depending on its source. These contaminants need to be removed from the water to a satisfactory degree otherwise the contaminants will form deposits/build-ups on the internal workings of the devices that combust middle distillate fuels, as well as present themselves as unacceptable pollutant emissions in the combustion exhaust.

Cost cost

The filtered water is added to the hydrocarbonaceous middle distillate fuel along with an additional additive of water, ammonia hydroxide, a fatty acid mixture and a polyanhydride. The preferred fatty acid mixture is technical grade oleic acid available from Ashland Chemical Company 2788 Glendale Milford Road, Cincinnati, Ohio USA under the name 213 OLEIC ACID TECHNICAL. The preferred polyanhydride is polyisobutylene succinic anhydride which can be procured from Chevron Oronite Company, under the Chevron Oronite LLC.'s label OLOA 371 or OLOA 213. OLOA 371 and OLOA 213 products are differentiated only on the basis that one label represents the paste form of the isobutylene succinic anhydride while the other label represents the liquid form of isobutylene succinic anhydride. Both forms of OLOA product can be used satisfactorily as components. A preferred polyanhydride is polyakenyl succinic anhydride.

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The mixture ratio of the components of the water-in-oil emulsion fuel is by weight percentage. The weight percentage of the hydrocarbonaceous middle distillate fuel to the water-in-oil emulsion fuel is about 81% to about 99.5%. The weight percentage of middle distillate fuel emulsification additive to the water-in-oil emulsion fuel is about 0.5% to about 19.0%, preferably about 0.5% to about 5%. The weight percentage of water to the water-in-oil emulsion fuel is about 0.0% to about 18.5%.

The mixture ratio of the components of the middle distillate fuel emulsification additive is by weight percentage. The weight percentage of water to the middle distillate fuel emulsification additive is about 0.0% to about 25.0%. The weight percentage of ammonium hydroxide to middle distillate fuel emulsification additive is about 15.0% to about 20.0%. The weight percentage of a mixture of fatty acids to middle distillate fuel emulsification additive is about 60% to about 70%. The weight percent of polyanhydride to the middle distillate fuel emulsification additive is about 3.0% to about 10.0%.